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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/721,482

11/25/2003

Chang-Soo Koo

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6044

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7590

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EXAMINER

LEE, JOHN J

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/721,482	Applicant(s) KOO ET AL.	
	Examiner JOHN J. LEE	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-28 is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 8-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/25/04, 1/20/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1 – 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Valkealahti (US 2002/0128031) in view of Nelson et al. (US 2003/0144019).

Regarding **claim 1**, Valkealahti discloses that a method of transmission power control for a transmitting wireless transmit receive unit (WTRU) (26 in Fig. 2) that transmits successive data sets in a forward channel where the transmitting WTRU is configured to make forward channel power adjustments as a function of characteristics of the data sets as received over the forward channel (Fig. 2, 3 and page 1, paragraphs 3 – 8, where teaches transmission power control for a mobile station that the base station transmits a forward channel with forward channel power control/adjustment as received over the forward channel). Valkealahti teaches that sequentially receiving successive data sets transmitted from the transmitting WTRU on the forward channel (Pages 2, paragraphs 27 – pages 3, paragraphs 32 and Fig. 2, 3, where teaches completely receiving data signal from the base station on the forward channel). Valkealahti teaches that successively computing transmit power control signals (calculating and computing the transmit power control signals) for the transmitting WTRU's forward channel power adjustments based on the characteristics of each of the data sets received on the forward

channel (Pages 2, paragraphs 18 – pages 3, paragraphs 32 and Fig. 2, 3, where teaches calculating and computing the power control signals for base station downlink channel power adjustments based on the received on the downlink channel). Valkealahti teaches that successively computing a bias error value based on the cumulative characteristics of the data set signals received on the forward channel (Pages 2, paragraphs 18 – pages 3, paragraphs 32 and Fig. 2, 3, where teaches calculating and computing the bias frame error value based on the received forward channel and adjusts the bias frame error value to a target bias frame error rate). Valkealahti teaches that in advance of each successive data set after the transmission of a first data set (completing all data signals), adjusting forward channel power (adjusting, power control, downlink channel by recently received signals) as a function of the most recently computed transmit power control signal and most recently computed bias error value (pages 3, paragraphs 29 – pages 4, paragraphs 44 and Fig. 5, 6, where teaches as completing received all data signals, adjusting downlink power control and bias frame error value by computing and calculating the resent received the signals with power control and bias frame error value).

Valkealahti does not specifically teach the limitation “sequentially receiving successive data sets transmitted from the transmitting WTRU on the forward channel with power control”. However, Nelson teaches the limitation “sequentially receiving successive data sets transmitted from the transmitting WTRU on the forward channel with power control” (pages 2, paragraphs 26 – pages 3, paragraphs 30 and Fig. 1, 2, where transmitting burst counter for counting the number of transmission burst which number is used later in the process as a threshold determinate on the forward channel

with performing power control and power adjustment). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Valkealahti system as taught by Nelson, provide the motivation to achieve enhancing the open loop power control between base station and mobile station.

Regarding **claim 2**, Valkealahti and Nelson teach all the limitation as discussed in claim 1. Furthermore, Valkealahti teaches that the transmitting WTRU is a network unit (base station in Fig. 2) that transmits data sets on a downlink channel and the computing of transmit power control signals is performed by a receiving WTRU that receives the downlink channel (Pages 2, paragraphs 18 – pages 3, paragraphs 32 and Fig. 2, 3, where teaches the base station performs that calculating and computing the power control signals for base station downlink channel power adjustments based on the received on the downlink channel).

Regarding **claims 3 and 6**, Valkealahti teaches that the transmitting WTRU computes the bias error values (pages 3, paragraphs 29 – 37 and Fig. 4, 5, where teaches calculating and computing the bias frame error value based on the received forward channel and adjusts the bias frame error value to a target bias frame error rate, and retransmitting).

Regarding **claims 4 and 7**, Valkealahti teaches that the receiving WTRU computes the bias error values (pages 3, paragraphs 29 – 37 and Fig. 4, 5, where teaches calculating and computing the bias frame error value based on the received forward channel and adjusts the bias frame error value to a target bias frame error rate).

Regarding **claim 5**, Valkealahti teaches that the transmitting WTRU (base station in Fig. 3) transmits user signals on an uplink channel and the computing of transmit power control signals is performed by a network unit (network controller in Fig. 3) that receives the uplink channel (pages 3, paragraphs 29 – pages 4, paragraphs 43 and Fig. 3, 5, where teaches the base station transmits the mobile station signals on the uplink channel to network controller and computing transmission power control).

Allowable Subject Matter

3. Claims 12 – 28 are allowed.

Claims 12 – 28 are allowable over the prior art of record because a search does not detect the combined claimed elements as set forth in the claims 12 – 28.

As recited in independent claims 12, 15, and 21, none of the prior art of record teaches or fairly suggests that a receiving wireless transmit receive unit (WTRU) for implementing transmission power control comprises the processor configured to successively compute a bias error value based on the cumulative characteristics of the data set signals received on the forward channel; and a transmitter configured to transmit on a reverse channel the transmit power control signals for the transmitting WTRU's forward channel power adjustments and the bias error values to the transmitting WTRU to thereby enable the transmitting WTRU, in advance of each successive data set after the transmission of a first data set, to adjust forward channel power as a function of the most recently computed transmit power control signal and most recently computed bias error

value, and together with combination of other element as set forth in the claims 12 – 28.

Therefore, claims 12 – 28 are allowable over the prior art of records.

4. Claims 8 – 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose “transmitting the power step commands as a function of computed target Signal to Interference Ratios (SIRs), on a reverse channel by the receiving WTRU, and receiving the power step commands by the transmitting WTRU on the reverse channel and computing power adjustments for forward channel transmissions based on the received power step commands” as specified in the claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iochi (US 2002/0196879) discloses Desired Wave/Interference Power Ratio Measuring Circuit and Desired Wave/Interference Power Ratio Measuring Method.

Ulupinar (US 2004/0047305) discloses Distributed Reverse Channel Outer Loop Power Control for a Wireless Communications System.

Information regarding...Patent Application Information Retrieval (PAIR) system... at 866-217-9197 (toll-free)."

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
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Or P.O. Box 1450
Alexandria VA 22313

or faxed (571) 273-8300, (for formal communications intended for entry)


Or: (703) 308-6606 (for informal or draft communications, please label
"PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to USPTO Headquarters,
Alexandria, VA.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to **John J. Lee** whose telephone number is **(571) 272-7880**.
He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00
pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor,
Edward Urban, can be reached on **(571) 272-7899**. Any inquiry of a general nature or
relating to the status of this application should be directed to the Group receptionist
whose telephone number is (703) 305-4700.

J.L
September 30, 2006

John J Lee


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
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